

REMARKS

A new Abstract of the Disclosure is submitted herewith. The new Abstract is believed to be in full compliance with the guidelines.

In the last Office Action claims 20, 22, 23 and 27 were objected because of informalities. Each of these claims has been amended to correct the informalities. Therefore it is respectfully requested that the objections be withdrawn.

In the last Office Action claims 17-23 inclusive were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rikker (4,947,923) in view of Takayuki (JP 1-005640). Claims 17-23 inclusive were further rejected under 35 U.S.C. § 103(a) as being unpatentable over Travillian (US 4,768,567) in view of Takayuki (JP 1-005640). Claims 24-28 inclusive were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rikker or Travillian in view of Takayuki as applied to claims 17-23 above and further in view of McMellon (US 4,736,787).

Reconsideration and allowance of claims 17-28 inclusive are respectfully requested in view of the following remarks.

The present invention as defined in claim 27 is directed to a container filling device for lost-foam casting systems which include supporting means for the containers with associated vibration means to set the containers into vibrations and sand feeding means for feeding dosed quantities of sand in to the containers. Positioning means are associated with the containers to position foam models into said containers and that are capable of sustaining said models while the sand is being fed into the container by the feeding means and while the containers containing the models are vibrated by the vibration means. The positioning means include first gripping means capable of acting on the models and second gripping means capable of acting on the

containers so that with the first and second gripping means actively gripping the models and the container the models and the container will be substantially connected to each other as a single piece during a vibrational motion generated by the vibration means.

In the Final Rejection the Examiner has conceded that the two basic references relied upon, namely Rikker and Travillian both fail to disclose first and second gripping means which will grip the models and the containers respectively so that the models and the container will be substantially connected to each other as a single piece during the vibrational motion generated by the vibration means. In an attempt to meet the shortcomings of the teachings of the basic references the Examiner has relied upon the teachings of Takayuki. It is submitted that Takayuki et al. fails to disclose the principle feature of the present invention, that the models and the containers are substantially connected to each other as a single piece during the vibrational motion generated by vibration means.

Referring to the English Abstract and the drawings of the Japanese publication, Takayuki shows an apparatus for inserting a lost foam pattern in an open container (molding box) 4 which is to be filled with sand and vibrated. The pattern is fitted into a downwardly open vessel 18 through which sand can pass and both the pattern and the vessel are inserted into the molding box 4. The molding box 4 rests on a table to be vibrated by vibrating means 6. The pattern M and the vessel 18 are suspended from a carriage 12 slidable along an arched guide rail 10. The structure for supporting and comprising the rail 10 is elastically suspended with respect to the fixed frame 9 through springs 8. When the molding box 4 is subjected to vibration the vessel 18 and a pattern are inclined together by moving the carriage 12 along the arched guide rail 10.

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There is absolutely no disclosure whatsoever of imparting vibrations from the vibrating means 6 to the model and the vessel in which it is secured. The Examiner appears to be confusing the vessel 18 with the container or molding box of the present invention. The container or molding box 4 of Takayuki is equivalent to the container C of the present invention and there is absolutely no connection between the model and the vessel 18 with the container or molding box 4. The Takayuki elastic suspension of the model within the sand box (springs 8) provide a teaching directly opposite to that of the present invention as claimed in claim 17 in as much it allows relative movement between the model and the container 4 which is being vibrated. Thus the teachings of Takayuki fail to disclose or even remotely suggest the rigid connection between the model and the sand container as specifically called for in the last paragraph of claim 17. Thus in view of the shortcomings of the teachings of Takayuki it would not be the least bit obvious to one skilled in the art to even attempt to combine the teachings of Takayuki with Rikker or Travillian and even if combined the resultant structure would fail to meet the limitations of claim 17. Claims 18-28 are all dependent directly or indirectly from claim 17 and accordingly it is not deemed necessary to argue the rejection which included McMellon. It is submitted that claims 17-28 would not be obvious in view of the prior art applied in the last Office Action and therefore it is respectfully requested that these claims be allowed and the application passed to issue forthwith.

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If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Robert V. Sloan', written over a horizontal line.

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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

20. (Amended) A device in accordance with Claim 17, wherein said second gripping means have associated with them means for bringing them back into their open position.

22. (Amended) A device in accordance with Claim 21, also including ~~also~~ mobile equipment capable of performing a relative movement of lowering and raising with respect to said containers and wherein said sand-feeding means and said positioning means are carried by said mobile equipment.

23. (Amended) A device in accordance with Claim 22, wherein said moving structure includes a frame that is connected as a single piece with the said mobile equipment and sustains said positioning means, which rest on it; the arrangement being such that, when the said mobile equipment is in its lowered position relative to said container, said positioning means will become transferred to and rest on the said container, so that the moving structure will be disengaged from both said positioning means and said container.

27. (Amended) A device in accordance with Claim 17, further including:
-means for handling said models capable of transferring said models to said positioning means;

-shape recognition means associated with said handling means and capable of recognizing, among a set of possible models, a particular type of models that, at that particular

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moment, is being carried by the handling means, generating a corresponding type identification signal.

IN THE ABSTRACT OF DISCLOSURE:

Delete the Abstract as submitted with the last response and substitute therefore the Abstract submitted herewith on a separate unnumbered sheet.